Business capabilities for industrial firms: A bibliometric analysis of research diffusion and impact within and beyond *Industrial Marketing Management*

Kouropalatis, Y. – Cardiff Business School – Cardiff University; Cardiff (UK)
Giudici, A. – Cass Business School – City, University of London; London (UK)
Acar, O. A. – Cass Business School – City, University of London; London (UK)

ARTICLE INFO

Keywords:
Dynamic capabilities
Diffusion
Reification
Relevance
Rigor

ABSTRACT

An extensive body of work investigates business phenomena from the capability perspective introduced by Teece, Pisano, and Shuen (1997). While several literature reviews on capabilities exist, research is still fragmented with ongoing debates between those trying to foster relevance and passionate critics in favour of rigour. This study contributes to the conversation by looking at how the community of scholars gathered around *Industrial Marketing Management* (*IMM*) has engaged with this body of work and, in turn, influenced other sub-communities. Specifically, using the *CitNetExplorer* software, we analyse all *IMM* capabilities-related publications and their direct influence on other journals. The findings unveil seven thematic clusters that highlight how *IMM* scholars have expanded capability research by deepening the understanding of its relational foundations. Our data not only reinforce prior warnings about weak validity, but also uncover signs that suggest that the *IMM* community is on a path of theoretical consolidation with potential benefits for the broader conversation.

Accepted for publication
in *Industrial Marketing Management*

This version is yet to be copy-edited by the Journal.

Acknowledgments
This paper has greatly benefitted from the support and comments provided by the Editorial Team whom we thank sincerely. All errors remain ours.

1. Introduction

It is often maintained that scientific development relies on the compelling theorizations of puzzling phenomena, and robust efforts to test and falsify such theorizations (Popper, 1959). Whereas falsification is typically the main concern of natural scientists, in social science there is more emphasis on the so-called 'theoretical contribution' (e.g., Corley & Gioia, 2011; Whetten, 1989). In this latter domain, scholars have long debated on what constitutes appropriate theory (Gulati, 2007; Kieser, Nicolai, Seidl, 2015), with two main camps engaged in a never-ending battle between those who favour the relevance of novel theorizations for the 'real' world (e.g., Visconti, 2010) and those who passionately argue for the protection of rigorous standards (Gnyawali & Song, 2016). Hirsch and Levin (1999) characterized the tension between these two camps as one between 'umbrella advocates' – those for whom conceptual flexibility are a necessary cost to enhance relevance – and 'validity police' – those who warn about the risks of conceptual sloppiness for the long-term legitimacy of social research. They described the life-cycle of idea diffusion as being constantly at the cross-roads between excitement and conceptual collapse.

This special issue of *Industrial Marketing Management* (henceforth *IMM*) is dedicated to research on marketing development from the capability perspective of which a significant milestone is the work of Teece, Pisano, and Shuen (1997). The evolution of this perspective offers one of the most prominent examples – in terms of volume and intensity of debate – of the tension between umbrella advocates and validity police. After more than 20 years, capability research is still full of excitement at a rate of over 600 articles published every year and enriched by tens of literature reviews[1] trying to bring validity checks into the

[1] At the time of writing, a database search combining "capability*" and "review" in "Title" on Web of Science yielded 31 review articles in the Business and Management categories. This is a conservative estimate since, for instance, this search did not report well-cited reviews such as Helfat and Peteraf (2009), Giudici and

conversation. Yet, as the Editors' call makes it clear, the literature remains largely fragmented and is in urgent need for conceptual tiding up (Hirsch & Levin, 1999).

In this paper, we start addressing this challenge from a 'battlefield' angle; that is how academic journals – and *IMM*, in particular – have shaped the theoretical development of the capability perspective. Nearly a decade ago, Arend and Bromiley (2009) and Helfat and Peteraf (2009) offered perspectives that were in sharp contrast on the topic, with the former claiming that the capability construct had become a sort of magic talisman to explain successful business change and the latter counter-arguing that the field was in need for more time to flourish. Giudici and Reinmoeller (2012) played somehow the role of the referee, providing evidence in support of both sides and demonstrating the merits and limits of each point of view. Schilke, Hu, and Helfat (2018: 416) have recently repeated Giudici and Reinmoeller's (2012) call to pay "continued careful attention to how research tests, extends, or refutes" the capability perspective, reinforcing the Editors' sense of urgency. In addition, while Giudici and Reinmoeller (2012) unveiled the role of leading authors in shaping the life-cycle of the capability perspective, they overlooked the fact that journals "play distinct roles in a larger system of knowledge creation and dissemination" (Daft & Lewin, 2008: 178).

This study is one of the first steps towards addressing the role specific journals play in creation and dissemination of capabilities research. In particular, the purpose of this study is: a) to review how the community of scholars gathering together around *IMM* has engaged with capability issues in the context of (industrial) marketing; b) to analyse how capability research developed in the journal has then influenced the broader capability conversation

Reinmoeller (2012), Di Stefano, Peteraf, and Verona (2014), Peteraf, Di Stefano, and Verona (2013) and several others.

beyond the boundaries of the journal itself. We do so by means of a bibliometric analysis using the *CitNetExplorer* software as well as an in-depth analysis of sub-communities dealing with different capability-related themes. Our main objective is to help reduce the fragmentation in the IMM scholarly community while at the same time contributing to bridging the rigor-relevance gap in the capability research.

1.1 Overview of capability research

Research on capabilities has been largely originated from the seminal paper of Teece, Pisano, and Shuen's (1997)[2] where the construct of 'dynamic capabilities' was introduced to emphasize the importance of "a firm's capacity to undertake entrepreneurial innovation systematically as the cornerstone of its long-term competitive advantage" (Giudici, Reinmoeller, & Ravasi, 2018: 4). As prior reviews show (e.g., Di Stefano, Peteraf, & Verona, 2014; Peteraf, Di Stefano, & Verona, 2013), in its first decade of diffusion the construct generated significant excitement among researchers. Despite remaining scattered, several sub-communities and sub-conversations on the topic have enriched our understanding of capabilities while at the same time leading to the abovementioned intellectual 'battle' about rigor-relevance between Arend and Bromiley (2009) and Helfat and Peteraf (2009).

In 2007, Teece's intervened in the debate with another influential contribution[3] where he conceptualized a firm's capacity to drive innovation as pertaining to the "(1) identification and assessment of an opportunity (sensing); [the] (2) mobilization of resources to address an opportunity and to capture value from doing so (seizing); and (3) continued renewal (transforming)" (Teece, 2012: 1396, emphasis in original). In the same year, he also

[2] At the time of writing, Teece, Pisano, and Shuen's (1997) paper had received over 8,412 citations in the Web of Science database and nearly 32,000 on Google Scholars.
[3] At the time of writing, Teece (2007) had received over 2,271 citations in the Web of Science database and nearly 7200 on Google Scholars.

collaborated with other well-established scholars to publish a book that put forward a more shared view (see Helfat et al., 2007). Over the last decade, the intensity of the 'validity challenge' has been reduced – thanks, for example, to an increase in empirical research and more interventions from key scholars in the conversation (e.g., Teece, 2012; 2014)[4] – yet the debate is far from settled (cf., Schilke et al., 2018).

The construct of 'capabilities' with the meaning ascribed to it by Teece and colleagues entered the conversation among industrial marketing scholars in *IMM* in 2000 with Lukas and Bell's work on R&D capabilities and strategic market positions. This had followed shortly Möller and Halinen's (1999) work on business capabilities and networks where it was embedded in second-level citations. Despite a number of other contributions explicitly referring to Teece et al.'s article (e.g., Calantone, Cavusgil, and Zhao, 2002; Kaleka, 2002; Möller & Torronen, 2003), the construct did not really diffuse in the community until after 2006 when it started averaging around 20 publications per year. Over the last five years (2013-2017), it has gained an increased popularity, with an average of 29 publications per year[5] and, in mid-2018, there are already 32 articles using the construct. In the rest of this study, we review this growing body of work to understand how and why the industrial marketing community has adopted the capability perspective so extensively. We then explain how the community has gone beyond its boundaries to influence this important body of work more broadly.

[4] According to Web of Science, in the period 2008-2018 David Teece has published at least 16 articles directly referring to the topic of 'dynamic capabilities' in the title. This presents a sharp increase, for instance, to the number of papers, a total of 5, he published in the period 1997-2007, including the two very influential ones described in the section.

[5] As point of reference, *Industrial Marketing Management* has published an average of around 140 manuscripts per year in the period 2013-2017, approximately 21 % of which cited Teece et al.'s (1997) every year.

2. Research context and methodology

2.1 Definition of the field of study

This study evaluates and describes the impact, evolution, and diffusion of research on the theme of business capabilities (Teece et al., 1997) from the view point of IMM as the 'battlefield' where the construct was utilized and debated (Daft & Lewin, 2008; Giudici & Reinmoeller, 2012). It presents a bibliometric analysis based on a range of metrics that reflect the evolution of capability research within and beyond the boundaries of the journal. It uses a set of descriptive quantitative techniques to analyse secondary bibliometric data and to generate an objective evaluation of capability research in terms of its lifecycle, the emergence of research themes, and key evolutionary stages (Rey-Martí,Ribeiro-Soriano, & Palacios-Marqués, 2016; Albort-Morant & Ribeiro-Soriano, 2016).

The primary stage entailed the identification of all IMM publications focusing on the capability construct. Next, to ascertain the impact of IMM capability research and its impact and diffusion, it was necessary to identify all publications in other fields that were directly influenced by IMM capability research.

2.2 Bibliometric analysis method and software

The focus of a bibliometric analysis is the exploration of intellectual structure within a field of study by using citations among publications as an indicator of research influence and evolution (Brown, Abduljabbar, Eglund & Treen, 2018; Martínez-López, Merigó, Valenzuela-Fernández, & Nicolás, 2018; Schildt & Mattsson, 2006). In addition, this method is often used by researchers to evaluate relationships between the most influential publications through the analysis of direct citations and cross-citations, and cluster them into related groups to identify established and emergent research themes or sub-themes (Schildt & Mattsson, 2006). This study adopted direct citations as the key indicator of research

influence, as it offers a stronger indication of relatedness in comparison to alternatives such as bibliographic coupling or co-citation analyses (Klavans & Boyack, 2017; Sarin, Haon, & Belkhouja, 2018; van Eck & Waltman, 2017).

Citation analyses are typically conducted using dedicated software suites that offer a range of approaches to investigate direct citations, co-citation coupling, and/or relatedness among alternative keywords (Klavans & Boyack, 2017). This study used *CitNetExplorer*, a free and open-access program for bibliometric analysis developed by van Eck & Waltman (2014). The software offers a set of options designed to study the development of a research field over time as well as tools for statistical analysis designed to explore relatedness among published works. More specifically, *CitNetExplorer* utilises direct citations as a key indicator of research evolution over time and includes cluster analysis which we use to identify research relatedness and emergent themes (van Eck & Waltman, 2017). The clustering technique employed calculates a quality function based on the work by Newman and Girvan (2004). Publications are assigned to a single cluster based on the maximization of a quality function as formulated by van Eck & Waltman (2017):[6]

$$Q(x_1, \dots, x_n) = \sum_{i=1}^{n} \sum_{j=1}^{n} \delta(x_i, x_j) \left(a_{ij} - \frac{\gamma}{2n}\right)$$

The relatedness of publication is based on respective direct citations irrespective of citation directionality. The resolution parameter γ is manipulated with the purpose of optimising the clustering solution. The maximisation of the quality function ultimately relies on a variation of the Louvain modularity optimisation (Blondel, Guillaume, Lambiotte, & Lefebvre, 2008). While cluster analysis enables the identification of research themes

[6] n : *number of publications*,
a_{ij} : *relatedness of publications*,
γ : *resolution parameter*,
x_i : *cluster to which publication i is assigned*,
$If\ (x_i = x_j), Then\ \delta(x_i, x_j) = 1, otherwise\ 0$,
$a_{ij} = \frac{c_{ij}}{\sum_{k=1}^{n} c_{ik}}$ where $c_{ij} = 1\ if\ pub\ i$/j cites pub j/i

comprising of publications with a degree of relatedness, additional investigation was needed for refinement and post-processing of bibliometric indicators. The evolution trends that were investigated included: research theme attractiveness (publication volume), impact level (citation level), impact concentration (citation rate), geographical origin and methodology focus.

2.3 Database and population selection

All data were generated and extracted from the Web of Science SCI-Expanded Index which is a multidisciplinary database with recognized advantages over other databases in terms of journal coverage and content quality (Waltman, 2016). The reason for focusing on Web of Science instead of alternatives such as Scopus is the relative strength of this database in terms of quality and depth of published articles and journals (e.g., Ball and Tunger, 2007). The initial search was defined using the search term "capab*" that yielded a total of 336 IMM publication spanning the period 1996–2018.[7] Subsequently, all publications directly influenced by the IMM body of knowledge were identified. This was achieved by selecting all publications that cited the IMM core directly. The search was narrowed down to three selected Web of Science categories that were deemed close enough to the core - Management, Business and Operations Research, and Management Science – and this step produced a total of 4776 publications. Together with the original IMM articles, a total of 5112 publications formed the population of interest for the present study (336 core publications + 4776 directly influenced by the core).

[7] The time span of our search was unrestricted and returned one paper published in 1996 rather than from 1997, i.e. the publication year of Teece et al.'s. This can be explained in two ways. First, Teece et al.'s (1997) article was widely circulated, and sometimes cited, before its publication. Second, the term 'capabilities' was already used in research from a resource-based view perspective.

2.4 Indicators and analysis

The secondary data generated by the bibliometric analysis provided the source database which was then used to estimate key indicators and proxies of research impact, diffusion and lifecycle evolution. Inter-citations within the focal research domain were initially analysed to shed light on the relationships and impact diffusion (Chen & Xiao, 2016). Direct citations between publications offered a structural indication of research relatedness and were analysed as a proxy measure of research influence over time. The actual *Citation Score* (*CR*) for a unique publication or a group of related publications served as a measure of influence weight.[8]

All secondary data were codified to identify key identifiers and measures including: *Author(s), Publication Title, Publication name, Year of publication and Citation Score*. They were then processed further to formulate proximal metrics for measuring the *diffusion*, *impact* and *evolution* of IMM capabilities research. The proximal measures / indicators comprised the following:

- *Emergent Research Theme / Cluster*: Groups of publications converging on a common research theme or focus. Groups and publication membership to groups were identified based on hierarchical clustering performed within *CitNetExplorer* that included both IMM publications and research subsequently influenced by IMM. This enabled the identification of established and emerging research themes originated by IMM capability research.

[8] Average Citation Score Y(x) = ∑Citations Y(x)/∑Publication Y(x). Y is the year of focus. (x) ranges between 2005 and 2015.

- *Citation Level:*[9] The sum of citations (inflation adjusted) for all publications in a given year. This metric was employed as a reflection of research impact within the context of the population where IMM capability research diffused. *Citation Level* represents the *Citation Score* adjusted for *Citation Inflation*– calculated as 21.5% - to account for the temporal delay in citation impact that usually affect more recent publications because they might not have had enough time to diffuse.
- *Citation Rate*: Average citation score within a given year. It included the ratio of the total citation level and the publication volume for a given year. The study used this measure as a proxy for the 'pulse' of research diffusion that is the point in time during which a specific research population presented the strongest average citation score. The calculation of *Citation Rate* took also into account (and partially adjusted for) the expected delay in the realization of citation impact.
- *Publication Volume*: The sum of publications in the focal population within a given year. This proxy reflected the dissemination of IMM capabilities research and was also used to evaluate research growth over time, especially in the comparison of emerging research themes.
- *Authorship by Geography*: The publication volume originating from specific geographical locations (based on the first author).
- *Methodological Focus*: A measure of publication volume based on the methodology employed, categorized broadly as conceptual, qualitative and quantitative.

[9] Citation Level was calculated as: Inflation Adjusted Citation Score Y(x) = Citation Inflation Y(x) * Citation Adjustment Factor Y(x). Citation Inflation: Inflation Y(x) = (Average Citation Score Y(x) – Average Citation Score Y(x-1))/Average Citation Score Y(x-1). Citation Adjustment Factor Y(x) = Inflation Y(x-1) * (1 – Average Inflation (2005-2015)).

3. Results

3.1 Descriptive analysis

Table 1 presents the Top 20 most influential publications within the publication dataset. As the table illustrates, these publications had substantial impact on the field, each yielding 100+ citations. The most cited paper in the list is "Learning orientation, firm innovation capability, and firm performance" by Calantone et al. (2002) with over 500 citations. In this paper, the authors discuss the components of learning orientation (i.e., commitment to learning, shared vision, open-mindedness, and intra-organizational knowledge sharing), and how they relate to innovative capabilities and, in turn, business performance. The second most cited paper – "Innovativeness: Its antecedents and impact on business performance" by Hult, Hurley, and Knight (2004) – is the only other paper with over 200 citations. The authors have developed a model which identifies the main determinants of innovativeness, and how innovativeness as a capability influences business performance. Both papers were published in *Industrial Marketing Management* like the subsequent three papers on the top of the list.

To clarify the influence and impact of IMM capabilities research further, the research core (IMM) was separated from the publication dataset. The analysis then proceeded to identify capabilities-related research as originated from IMM and its subsequent influence on a range of important scholarly journals.[10] Among the papers that were directly

[10] We acknowledge that this assessment could have been strengthened by investigating not only articles citing IMM capability research ('citation received') but also those that were most highly cited by IMM papers in our population ('citation sent'), in a way like Martínez-López et al. (2018). The two analyses together would have allowed us to create better centrality measures and thus to capture the most influential articles more precisely. However, *CitNetExplorer* did not allow for such analysis to be conducted using the same dataset in a consistent way and this represents an important limitation of our study. We suggest that future research could expand our analysis and overcome this limitation by using, for example, other bibliometric software such as Sitkis (Schildt, 2006; e.g., Giudici & Reinmoeller, 2012). We thank one of the reviewers for this suggestion.

influenced by *Industrial Marketing Management*, Ulaga and Eggert's (2006) paper in the *Journal of Marketing* – "Value-based differentiation in business relationships: Gaining and sustaining key supplier status", – Ritter and Gemünden's (2003) in the Journal of Business Research – "Network competence: Its impact on innovation success and its antecedents", - and Möller, Rajala, and Svahn's (2005) – "Strategic business nets: Their type and management" – had the highest citation score with 159, 111, and 103, respectively.[11] The first paper found that relationship capabilities (especially service support and personal interaction) play the most substantial role for organizations to emerge as key supplier in business relationships. The second and the third paper both emphasized the importance of network orchestration capabilities in the creation of innovation from an empirical and conceptual point of view. It is also worth noting that, restricting the analysis to articles with a citation score of at least 50, the *Journal of Business Research* was the outlet more extensively influenced by IMM research followed by the *Strategic Management Journal*, the *European Journal of Marketing* and *Technovation*.

Finally, *Authorship by geography* was also explored by extracting the institutional affiliation of the primary author of each paper and its geographical location. Figure 1 presents an overview of the top 4 authorship by geographical origins and their evolution over time. These results indicate that IMM publications focusing on capability research, originated primarily in the US with scholarly work in the UK following closely. The evolution pattern between these two countries is broadly similar although in recent years UK-based work starts to have taken the lead. Finland and China follow the suit with the latter indicating potential maturity from 2015 onwards.

[11] Excluded review papers in other journals that cited *IMM* research as part of broader literature assessments.

3.2 Emerging research themes

The bibliometric analysis identified seven emergent research themes. Figure 2 depicts these themes and the lifecycle for capabilities research. These themes could be further categorized in four steps which reflects the theoretical evolution of capabilities research from the emerging excitement to the expansion of boundary conditions. This section details these seven themes and presents the impact and diffusion analyses for each of them (see Table 2 for an overview). We then unpack these emerging themes further in the following sections.

Most of the earlier research on capabilities falls under the first theme – *Cluster 1: Capabilities and Business Value* – that focuses on the consequences of capabilities in terms of business value creation (and performance). Cluster 1 constituted a substantial portion of the dataset with 1512 publications that is 29.5% of total population. As detailed in the impact and diffusion analyses, the *Publication Volume* in this cluster has consistently increased over the past three decades although the *Citation Rate* started to decline in the past few years. The main emphasis on this line of research has been identification of various capabilities and how they relate to different types of value creation. For example, Möller and Torronen (2003), the most cited paper in this cluster, developed a conceptual model which delineates three essential supplier capabilities (i.e., production, innovation, relational capabilities) and links these capabilities with various forms of relational value production. Möller and Hallinen (1999) likewise suggested that network management capabilities (i.e., network visioning and network management), together with portfolio and relationship management capabilities are the essential drivers of value creation in network environments. In addition, this line of research has taken important steps in identifying

moderators that could better explain when each kind of capabilities matters most. Drawing on a quasi-longitudinal analysis, Eggert, Ulaga and Schultz (2006), for instance, found that the capabilities of suppliers in creating value during the customers' sourcing process becomes progressively less important over the relationship lifecycle.

A second broad theme in capabilities research – *Cluster 2: Capabilities and RBV Orientation* – has drawn, either explicitly or implicitly, on the resource-based view (RBV) generating substantial research interest (1483 publications; 29% of total population). In contrast to a steady increase of publications, citation levels for this cluster have sharply declined in the past few years. This line of research has typically addressed the consequences of marketing, learning and innovation orientation and their interplay with more emphasis on strategic competitive advantage. To illustrate, a sizable number of scholars have highlighted the importance of learning-related constructs (e.g., learning orientation, relationship learning, or absorptive capacity) for a firm's innovation capability which was in turn associated with greater firm performance and competitive advantage (e.g., Aragon-Correa, Garcia-Morales, and Cordon-Pozo, 2007; Calantone et al., 2002; Chen, Lin, and Chang, 2009; Hult et al., 2004). In a similar vein, others have established that marketing capability is essential for competitive advantage (e.g., Ngo and Cass, 2009; Weerawardena and O'Cass, 2004). Scholars have also shown that these orientations and capabilities can interact and/or influence one another. For example, Auh and Menguc (2006) found that the effect of market orientation on firm performance is stronger for companies with higher innovative capability. Likewise, Rhee, Park, and Lee (2010) found that market orientation and entrepreneurial orientation influence learning orientation which in turn affects a firm's innovative capability and thus its performance.

In contrast to the previous two, the subsequent five themes relate to domain-specific capabilities. This characteristic could be interpreted as an indication of a greater level of theoretical progression in the field because the expansion of capabilities research to a wider range of domains is likely to occur only after the generation of substantial interest in the core domain. *Cluster 3 – Supply Chain Capabilities* – had received the strongest scholarly interest with 1130 publications (22% of the publication population). The pattern of impact and diffusion of this theme was like that of Cluster 2 that is a generally steady increase in publication volume despite a decreasing citation impact. The two capabilities that received the highest attention in this theme are supply chain agility and flexibility (e.g., Agarwal, Shankar, and Tiwali, 2007; Fredericks, 2005; Swafford, Ghosh, and Murthy, 2008). Particular emphasis was also given to the role of information technology in supporting supply chain capabilities (Swafford et al., 2008; Wu, Yeniyurt, Kim, and Cavusgil, 2006) and supply chain integration (Martin and Grbac, 2003; Ragatz, Handfield, and Petersen, 2002).

A fourth research theme – *Cluster 4: Capabilities and Internationalization* – explored the role of capabilities within the context of internalization. In comparison to the previous three themes, this cluster contains relatively less publications (304; 6% of the publication population). Although the cluster enjoyed a steady increase in terms of publications and impact for over a decade, this trend has recently started to reverse. A substantial portion of research in this cluster has focused on the capabilities required for born-global companies (e.g., Freeman, Edwards, and Schroder, 2006; Jantunen, Nummela, Puumalainen, and Saarenketo, 2008; Laanti, Gabrielsson, and Gabrielsson, 2007; Weerawardena, Mort, Liesch, and Knight, 2007) or industrial export ventures (Kaleka, 2002; Morgan, Kaleka, and Katsikeas, 2004) to succeed.

The fifth research theme focuses on capabilities in customer relationship management (CRM) – *Cluster 5: Customer Relationship Management Capabilities* – but includes a relatively small portion of the publication population (272 publications; 5.3%). *Citation Level* on this topic has dropped sharply in the past few years despite a growing interest in publishing on this topic. This line of research has identified a number of specific CRM capabilities (e.g., Wilson and Daniel, 2007) and also explored when and why such capabilities create value for firms (e.g., Reimann, Schilke, and Thomas, 2010; Slater, Hult, and Olson, 2010). Scholars have also found particularly interesting questions related to understanding the return on investment of CRM capabilities (e.g., Ryals, 2005; Seggie, Cavusgil, and Phelan, 2007).

The sixth research theme – *Cluster 6: Branding Capabilities* – focuses on capabilities that are specific to branding (126 publications, 22% of the publication population). Most of the research in this cluster has addressed related concepts such as brand value (e.g., Leek and Christodoulides, 2012), brand equity (e.g., Baumgarth and Schmidt, 2010), brand leadership (e.g., Beverland, Napoli and Lindgreen, 2007), brand orientation (e.g., Baumgarth, 2010), brand image (e.g., Persson, 2010), and co-branding (e.g., Bengtsson and Servais, 2005). Other important questions tackled in this theme include how branding capabilities relate to SME performance (e.g., Merrilees, Rundle-Thiele, and Lye, 2011) and the challenges of B2B branding (e.g., Leek and Christodoulides, 2011).

The final emergent theme – *Cluster 7: Coopetition Capabilities* – focuses on co-opetition capabilities that is the capability of firms to build and maintain cooperative relationships with competitors (118 publications, 2.3% of publication population). Research in this theme has enjoyed a substantial increase both in terms of publications and overall citations from 2011 but the trend has reversed more recently. Prior research has focused on the

capabilities that are necessary to deal with the paradoxes introduced by coopetition (Gnyawali, Madhavan, He, and Bengtsson, 2016), those related to guanxi relationships (e.g., Chen and Wu, 2011; Luo, Huang, and Wang, 2012), and on conditions under which coopetition generates value for firms (e.g., Ritala, 2012; Ritala and Hurmelinna-Laukkanen, 2012; Ritala and Hurmelinna-Laukkanen, 2012; Wu, 2014).

Figure 3 presents an overview of these seven themes and their development from a temporal standpoint. It also depicts the gradual progression and overall maturity of the IMM capabilities research. As shown, the scholarly interest on capabilities has evolved from a broad focus on capabilities and their consequences to more attention to domain-specific capabilities. This is further evident when assessing the diffusion of inter-cluster influence with a focus on the top five highest impact publications. Figure 4 highlights how *IMM* research gradually migrated from more mature and debated research towards more specialized and domain-specific themes. A closer look at dimensions such as 'publication volume' and 'citation level' – overall and by cluster – in Figure 3 also shows how capabilities research in *IMM* and influenced domains have received growing scholarly interest over the years – reflecting the early excitement. However, Clusters 1 and 2 have started to display signs of stagnation, Cluster 4 failed to keep the initial traction, and Clusters 3 and 5 grew by volume for a period before losing influence. At the same time, reflecting the ongoing fragmentation of the field (Hirsch & Levin, 1999), Clusters 6 and 7 have more recently emerged and provides areas of persistent excitement. This fragmentation may be a consequence of rapid growth of capabilities research within and across diverse domains. Importantly, this might prevent the effective synthesis of this swiftly expanding body of knowledge and represents a threat for the continuing development of the field.

3.3 Methodological focus

The research was deepened further by looking at the characteristics of the body of capability research in IMM over time in terms of *methodological focus*. This dimension was particularly important to explore the rigour/relevance debate more in detail because each methodological focus tends to shape the diffusion of constructs differently. It could be argued,[12] for instance, that emphasis on qualitative work could contribute to the umbrella advocates perspective since qualitative researchers tend to favour broader process-based explanations whereas, on the contrary, quantitative work is typically aimed at establishing higher construct validity and rigour. At the same, time, overemphasis on conceptual work usually risks reducing the long-term influence of a construct (e.g., Giudici & Reinmoeller, 2012).

Methodological focus was analysed by identifying a set of keywords for the three categories *Conceptual*, *Qualitative* and *Quantitative* (Granados, Hlupic, Coakes, & Mohamed, 2011). The metrics necessary to identify the keywords were generated manually by analysing titles, abstracts and authors' keywords from a sample composed by the top 70 papers according to citation count within the whole population. This step resulted in 15 identifying keywords corresponding to a conceptual methodology focus, 9 keywords indicating a qualitative focus, and 24 keywords associated with a quantitative focus. The entire population of IMM research on capabilities was then scanned and categorised automatically according to matches with the identified keywords. The results included the categorisation of 293 IMM publications (87.2% of the core). Figure 5 provides a summary of the findings that illustrate the evolution of each methodology focus over time. The analyses

[12] We thank to the anonymous reviewers for this suggestion.

suggest an initial balance between the three methodology foci, followed by a progressive relative increase in quantitative studies from 2008 onwards and a higher number of qualitative studies over conceptual work.

4. Discussion

Overall, the study unveils that the *IMM* community has not only engaged with capability research vibrantly but has also contributed to the broader conversation by influencing several sub-communities in other journals. In this respect, the analyses show seven key themes that depict the engagement within and across the boundaries of the community. The two most relevant and impactful themes – *Cluster 1: Capabilities and Business Value*; and *Cluster 2: Capabilities and RBV Orientation* – shows that *IMM* scholars have tackled central aspect of capability research directly, such as value, performance, and the role of resources. These themes exemplify the early excitement for the construct and the subsequent rise in interest for its organizational consequences. The main contribution from these themes has been a more precise understanding of the relational nature of the dynamic capabilities that support the value creation process in business-to-business contexts, with emphasis on up-stream supplier relationships and on the implications of the interplay of marketing and innovation capabilities on learning in networked contexts. The most cited papers are those by Möller and Torronen (2003; 186 *Citation Score* - *CR*), Möller and Halinen (1999; 168 *CR*), and Ulaga and Eggert (2006; 159 *CR*) in Cluster 1, and Calantone et al. (2002; 542 *CR*), Hult et al. (2004; 209 *CR*), and Aragon-Correa et al. (2007; 127 *CR*) in Cluster 2. All these papers are from *IMM* except the one by Ulaga and Eggert (2006) which is published in the *Journal of Marketing*. The theoretical influence of this body of work can be seen, for instance, in recent capability work in general management journals such as Giudici,

Reinmoeller, and Ravasi (2018) where the authors expand upon the relational nature of dynamic capabilities in the industrial marketing context of business matchmaking initiatives.

Perhaps not surprisingly, therefore, the third most relevant theme– *Cluster 3: Supply Chain Capabilities* – zooms into the importance of capabilities in supply chains and provides further theoretical and empirical elaboration on issues related to technology, strategic agility and flexibility, all of which are of great importance in today's digitally-enabled networked contexts. Most widely cited are studies by Wu et al. (2006; 171 *CR*), Hertz and Alfredsson (2004; 121 *CR*), and Kotabe and Murray (2003; 112 *CR*), all from *IMM*. In a similar vein, the fourth theme - *Cluster 4: Capabilities and Internationalization* – further specifies the manifestation of the capability phenomenon in specific areas paying attention to export capabilities and those necessary for born-global firms to survive. Influential studies in this theme are Morgan et al. (2004; 89 *CR*), Kaleka (2002; 69 *CR*), and Laanti et al. (2007; 57 *CR*), all from *IMM* except for Morgan et al. (2004) that was published in the *Journal of Marketing*.

The remaining three themes focus on specific knowledge domains that helped expanded the boundary conditions of capability research such as CRM, branding, and coopetition. In these domains, the literature suggests that capability-based advantages often trump environmental positioning advantages. The fifth theme – *Cluster 5: Customer Relationship Management Capabilities* – highlights issues typically related to the return on investment of CRM activities. The most influential papers are Zablah, Bellenger, and Johnston (2004; 96 *CR*) and Kim and Kim (2009; 35 *CR*) from *IMM* and Ryals (2005; 30 *CR*) from the *Journal of Marketing*. The sixth theme – *Cluster 6: Branding Capabilities* – investigates the different elements of branding (e.g., value, equity, image, etc.) from a capability perspective, with some attention dedicated to performance implications. The most cited papers are Merrilees

et al. (2011; 58 *CR*), Beverland et al. (2007; 45 *CR*), and Leek and Christodoulides (2012; 40 *CR*). The seventh theme – *Cluster 7: Coopetition Capabilities* – presents a rather focused discussion on relational capabilities in the context of relationships with competitors such as guanxi relationships in Asian business environments. Bengtsson and Kock (2014; 41 *CR*), Chen and Wu (2011; 38 *CR*), and Ritala (2012; 29 *CR*) are the most influential papers in the cluster. Ritala (2012) from the *British Journal of Management*, is the only one not from *IMM* among the most influential papers in Cluster 6 and 7.

From a more longitudinal perspective, our findings also highlight a continuing and growing popularity of capability research as influenced by IMM publications across geography and methodological foci. If, to an extent, the dominance of US and UK-based authorship might not be surprising, the dominant evolution of empirical work – quantitative, in particular – from 2006 is more counterintuitive since scholars typically tend to engage in intense conceptual work first. This unexpected result could be partly explained by the origins of capability research; this line of research has historically been deeply rooted in the US-based journals in general - and in the *Strategic Management Journal* in particular - where conceptual work proliferated in the period 1997-2006. This led to a number of literature reviews (e.g., Arend & Bromiley, 2009; Giudici & Reinmoeller, 2012; Helfat & Peteraf, 2009; Wang & Ahmed, 2007) and conceptual papers (e.g., Ambrosini & Bowman; 2009; Easterby-Smith, Lyles, & Peteraf, 2009) in the period 2006-2012 questioning the robustness and validity of the capability construct and passionately calling for more empirical work. It is thus likely that IMM initially relied on prior conceptual work from other sources but then decided to engage extensively with these calls for empirical work contributing significantly to the testing and further diffusion of the construct. This longitudinal evolution of the IMM body of capability work suggests that IMM research

contributed predominantly to supporting the validity police view while also remaining open to qualitative work. At the same time, these findings highlight that time might be propitious for taking stock of IMM-oriented empirical work to extend capability research with conceptual work shaped by the industrial marketing tradition. We advance research suggestions in the next section.

5. Conclusion

The diffusion of academic knowledge – ideas and constructs – is a process as part of which groups of scholars often debate passionately in favour of increased relevance or trying to protect rigorous standards (Hirsch & Levin, 1999). Daft and Lewin (2008: 179) argued that academic journals play an important role in the diffusion process, with some journals that "serve as a source of fountainhead for theoretical knowledge and ideas that become inputs to other subcommunities for research to be published in their own journals" (Daft & Lewin, 2008: 179). Research on the topic remains, however, scarce. In this paper, we have started filling this gap with a focus on how the community of industrial marketing scholars around *IMM* engaged with the extensive body of work on capabilities initiated by Teece et al. (1997).

5.1 Suggestions for future research directions

Our findings unpack insights about the diffusion of capability research within the *IMM* community and how its further elaboration has crossed the boundaries of the community itself influencing other sub-communities in Management, Business and Operations Research, and Management Science. It also offers several suggestions for future research direction related to the broader evolution of capability research within the *IMM* community and to the content of each research cluster.

With respect to the former, this study provides evidence of the increasing relevance of *IMM* capability research– as indicated, for example, by the fast-rising volume of publications, - but also offers a word of caution about the persistence fragmentation of the field confirming the Editors' remarks about the challenge of rigour and validity (Hirsch and Levin, 1999). For example, while our data shows a wide spectrum of citations of contributions from *IMM* received from other sub-communities, most of publications remain scattered across a high number of academic journals (4,057 publications citing *IMM* capability papers across 675 different outlets), with just 11 outlets accounting for at least 50 citing publications. *IMM* is the main outlet where articles citing our 336 core papers are located (1,052 citing contributions). The fact that these citing contributions were not included in the core of our search results may signal the reification of the construct (Lane, Koka, and Pathak, 2006) – i.e., an excess in ritual citations without any theoretical elaboration or empirical testing of the construct's key elements – and thus it may reinforce the validity challenge and the perception of a loss of attractiveness (Hirsch and Levin, 2009), at least within the *IMM* community. Future research might unpack further the process of diffusion that we outlined and uncover the underlying phases of reification (Giudici & Reinmoeller, 2012) to explore the role of academic journals as not just the 'battlefield' for the relevance-rigor debate, but also as the '*humus'* where idea can be nurtured and given time to prosper (cf., Helfat and Peteraf, 2009). In this respect, the substantial surge in publications over the last couple of years that build directly on Teece et al.'s (1997) capability construct offers reasons for optimism. It indicates that *IMM* capability research may have reached a stage that is mature enough to engage with the 'tidying up' of the conversation (Giudici and Reinmoeller, 2012; Hirsch and Levin, 1999).

As our Figure 3 shows, however, the maturity of capability research differs cluster by cluster. This provides further opportunities for researchers and Table 3 summarizes some of the most promising research directions that we identified while engaging with the literature, organized by cluster. Except for *Cluster 1 (Business Value)* – where we see a clear need for more meta-analytical studies to consolidate findings about the relationship between industrial marketing capabilities and business value – in all other clusters scholars could benefit from more emphasis on the interplay between capabilities and (frontier) technologies. For each cluster, we also provide some exemplar references both from prior *IMM* as well as non-*IMM* research.

Cluster 2 (RBV), we believe, could be rejuvenated by investigating industrial marketing capabilities in the context of Industry 4.0 and about whether it would be more effective for firms to 'make or buy' such capabilities. Examples are Kowalkowski, Gebauer, Kamp, and Parry (2017) who discuss issues of servitization in this context, and Wang and Chen (2015) who discuss the impact of product innovation capabilities on the advancement of supply-side technology capabilities. Another important theme could be to explore how these capabilities need to change when the emphasis, particularly in technology companies, starts to shift from demand- to supply-side strategies such as Amazon's recent investments in food logistics networks. In Cl*uster 3 (Supply Chain Management),* we see potential for deeper investigation of the role of new enabling technologies (Teece, 2018) such as blockchain and artificial intelligence for supply chain management and capabilities. Early examples include Wu, Yeniyurt, Kim, and Cavusgil (2006) with their study on information technology and supply chain capabilities from a resource-based view perspective, but also more recent work by Treiblmaier (2018) who studied the implications of blockchain for supply chain management. Next, in *Cluster 4 (Internationalization)* our review of the

literature suggests that despite the limited diffusion of this theme, more work would be beneficial in emerging economies such as Sub-Saharan ones where several incumbents have started to internationalize within the region, as well as in BRIC economies with particular attention to be paid to the fast rise of technology and non-technology 'unicorns' originating in China. Recent work includes, for instance, Smirnova et al. (2011) – with their study on marketing and relational capabilities in Russia, - and Martin and Javalgi (2016) who explored marketing capabilities and internationalization in Latin American firms.

Nascent clusters also offer several opportunities that could foster their diffusion further. We believe that both *Cluster 5 (CRM)* and *Cluster 6 (branding)* will grow significantly with more research about the impact of big data analytics and digital channels on how firms interact and engage with end-customers and users. Järvinen and Karjaluoto (2015) – who unpack the importance of developing web marketing analytics systematically – seems to provide a useful direction for new CRM research and, likewise, Kunz et al. (2017) who studied how big data could enhance firms' customer engagement mechanisms. Müller, Pommeranz, Weisser, and Voigt (2018) laid out instead important insights on digital branding capabilities by showing that power of digital branding when coupled with in-depth customer segmentation. Quinton and Simkin (2017) also unpacked the digital marketing journey by mean of a systematic literature review and emphasis on digital branding. Finally, we find particularly exciting the prospect to expand *Cluster 7 (Cooperation)* to collaboration in two-sided markets about how firms manage effectively marketing and supply chain relationships through complex platform models where multiple providers of complementary resources and capabilities compete and collaborate at the same time. Perks, Kowalkowski, Witell, and Gustafsson (2017) offer useful insights by looking at the role of network orchestrators in innovation platforms with collaboration among multiple actors (see also

Giudici, Reinmoeller, & Ravasi, 2018). Ozalp, Cennamo, and Gawer (2018) recently discussed threats of disruptions in platform models with emphasis on the role of complementors' capabilities.

Taking stock of the literature as we did in study, capability research in *IMM* and related journals seems far from losing its energy but also shows signs of maturity and persistent fragmentation. We invite scholars to go beyond the excitement because the long-term relevance even of the best ideas cannot be taken-for-granted. We hope that our study encourages authors to push rigorous theoretical elaboration and empirical testing along one or more of the research directions that we identified, with emphasis on enabling technologies. Academic journals – their editors and reviewers – bear the responsibility to maintain the balance in the 'battle' between 'umbrella advocates' and 'validity police' (Hirsch and Levin, 1999). The capabilities of the community to deliver are, we argue, not in short supply.

References

Agarwal, A., Shankar, R., & Tiwari, M. K. (2007). Modeling agility of supply chain. *Industrial Marketing Management*, *36*(4), 443–457. https://doi.org/10.1016/j.indmarman.2005.12.004

Albort-Morant, G., & Ribeiro-Soriano, D. (2016). A bibliometric analysis of international impact of business incubators. *Journal of Business Research*, *69*(5), 1775–1779. https://doi.org/10.1016/j.jbusres.2015.10.054

Ambrosini, V., & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Review*, 11(1), 29-49. https://doi.org/10.1111/j.1468-2370.2008.00251.x

Aragón-Correa, J. A., García-Morales, V. J., & Cordón-Pozo, E. (2007). Leadership and organizational learning's role on innovation and performance: Lessons from Spain. *Industrial Marketing Management*, *36*(3), 349–359. https://doi.org/10.1016/j.indmarman.2005.09.006

Arend, R. J., & Bromiley, P. (2009). Assessing the dynamic capabilities view: spare change, everyone? *Strategic Organization*, *7*(1), 75–90. https://doi.org/10.1177/1476127008100132

Auh, S., & Menguc, B. (2006). Diversity at the executive suite: A resource-based approach to the customer orientation–organizational performance relationship. *Journal of Business Research*, *59*(5), 564–572. https://doi.org/10.1016/j.jbusres.2005.10.006

Ball, R., & Tunger, D. (2007). Science indicators revisited – Science Citation Index versus SCOPUS: A bibliometric comparison of both citation databases. *Information Services & Use*, *26*(4), 293–301. https://doi.org/10.3233/ISU-2006-26404

Baumgarth, C. (2010). "Living the brand": brand orientation in the business-to-business sector. *European Journal of Marketing*, *44*(5), 653–671. https://doi.org/10.1108/03090561011032315

Baumgarth, C., & Schmidt, M. (2010). How strong is the business-to-business brand in the workforce? An empirically-tested model of 'internal brand equity' in a business-to-business setting. *Industrial Marketing Management*, *39*(8), 1250–1260. https://doi.org/10.1016/j.indmarman.2010.02.022

Bengtsson, A., & Servais, P. (2005). Co-branding on industrial markets. *Industrial Marketing Management*, *34*(7), 706–713. https://doi.org/10.1016/j.indmarman.2005.06.004

Bengtsson, M., & Kock, S. (2014). Coopetition—Quo vadis? Past accomplishments and future challenges. *Industrial Marketing Management*, *43*(2), 180–188. https://doi.org/10.1016/j.indmarman.2014.02.015

Beverland, M., Napoli, J., & Lindgreen, A. (2007). Industrial global brand leadership: A capabilities view. *Industrial Marketing Management*, *36*(8), 1082–1093. https://doi.org/10.1016/j.indmarman.2006.08.007

Blondel, V. D., Guillaume, J., Lambiotte, R., & Lefebvre, E. (2008). Fast unfolding of communities in large networks. *Journal of Statistical Mechanics: Theory and Experiment, P1008*. https://doi.org/10.1088/1742-5468/2008/10/P10008

Braganza, A., Brooks, L., Nepelski, D., Ali, M., & Moro, R. (2017). Resource management in big data initiatives: Processes and dynamic capabilities. *Journal of Business Research, 70*, 328–337. https://doi.org/10.1016/j.jbusres.2016.08.006

Brown, T., Abduljabbar, M., Treen, E. R., & Englund, S. (2018). Twenty-five years and counting: An analysis of the Journal of Strategic Marketing. *Journal of Strategic Marketing, 26(2),* 125-139. http://doi.org/10.1080/0965254X.2017.1411388

Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, *31*(6), 515–524. https://doi.org/10.1016/S0019-8501(01)00203-6

Chen, G., & Xiao, L. (2016). Selecting publication keywords for domain analysis in bibliometrics: A comparison of three methods. *Journal of Informetrics*, *10*, 212–223. https://doi.org/10.1016/j.joi.2016.01.006

Chen, X., & Wu, J. (2011). Do different guanxi types affect capability building differently? A contingency view. *Industrial Marketing Management*, *40*(4), 581–592. https://doi.org/10.1016/j.indmarman.2010.12.014

Chen, Y.-S., Lin, M.-J. J., & Chang, C.-H. (2009). The positive effects of relationship learning and absorptive capacity on innovation performance and competitive advantage in industrial markets. *Industrial Marketing Management*, *38*(2), 152–158. https://doi.org/10.1016/j.indmarman.2008.12.003

Corley, K. G., & Gioia, D. A. (2011). Building theory about theory building: What constitutes a theoretical contribution? *Academy of Management Review*, *36*(1), 12-32.

Daft, R. L., & Lewin, A. Y. (2008). Perspective—Rigor and relevance in organization studies: Idea migration and academic journal evolution. *Organization Science*, *19*(1), 177–183. https://doi.org/10.1287/orsc.1070.0346

Di Stefano, G., Peteraf, M., & Verona, G. (2014). The organizational drivetrain: A road to integration of dynamic capabilities research. *Academy of Management Perspectives*, *28*(4), 307–327. https://doi.org/10.5465/amp.2013.0100
Easterby-Smith, M., Lyles, M. A., Peteraf, M. A. (2009). Dynamic capabilities: Current debates and future directions. *British Journal of Management, 20*, S1-S8. https://doi.org/10.1111/j.1467-8551.2008.00609.x
Eggert, A., Ulaga, W., & Schultz, F. (2006). Value creation in the relationship life cycle: A quasi-longitudinal analysis. *Industrial Marketing Management*, *35*(1), 20–27. https://doi.org/10.1016/j.indmarman.2005.07.003
Ellis, P. D. (2006). Market orientation and performance: A meta-analysis and cross-national comparison. *Journal of Management Studies, 43(5)*, 1089-1107. https://doi.org/10.1111/j.1467-6486.2006.00630.x
Fredericks, E. (2005). Infusing flexibility into business-to-business firms: A contingency theory and resource-based view perspective and practical implications. *Industrial Marketing Management*, *34*(6), 555–565. https://doi.org/10.1016/j.indmarman.2004.09.022
Freeman, S., Edwards, R., & Schroder, B. (2006). How Smaller Born-Global Firms Use Networks and Alliances to Overcome Constraints to Rapid Internationalization. *Journal of International Marketing*, *14*(3), 33–63. https://doi.org/10.1509/jimk.14.3.33
Giudici, A., & Reinmoeller, P. (2012). Dynamic capabilities in the dock: A case of reification? *Strategic Organization*, *10*(4), 436–449. https://doi.org/10.1177/1476127012457977
Giudici, A., Reinmoeller, P., & Ravasi, D. (2017). Open-system orchestration as a relational source of sensing capabilities: evidence from a venture association. *Academy of Management Journal*. https://doi.org/10.5465/amj.2015.0573
Gnyawali, D. R., Song, Y. (2016). Pursuit of rigor in research: Illustration from the coopetition literature. *Industrial Marketing Management, 57,* 12-22. https://doi.org/10.1016/j.indmarman.2016.05.004
Gnyawali, D. R., Madhavan, R., He, J., & Bengtsson, M. (2016). The competition–cooperation paradox in inter-firm relationships: A conceptual framework. *Industrial Marketing Management*, *53*, 7–18. https://doi.org/10.1016/j.indmarman.2015.11.014
Granados, M. L., Hlupic, V., Coakes, E., & Mohamed, S. (2011). Social enterprise and social entrepreneurship research and theory: a bibliometric analysis. *Social Enterprise Journal, 7*(3), 198-218. https://doi:10.1108/17508611111182368
Gulati, R. (2007). Tent Poles, Tribalism, and Boundary Spanning: The Rigor-Relevance Debate in Management Research. *Academy of Management Journal*, *50*(4), 775–782. https://doi.org/10.5465/amj.2007.26279170
Halinen, A., & Törnroos, J.-Å. (2005). Using case methods in the study of contemporary business networks. *Journal of Business Research*, *58*(9), 1285–1297. https://doi.org/10.1016/j.jbusres.2004.02.001
Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: capability lifecycles. *Strategic Management Journal*, *24*(10), 997–1010. https://doi.org/10.1002/smj.332
Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D. J., & Winter, S. G. (2007). Dynamic Capabilities: Understanding Strategic Change in Organizations. London, U.K: Blackwell.
Hertz, S., & Alfredsson, M. (2003). Strategic development of third party logistics providers. *Industrial Marketing Management*, *32*(2), 139–149. https://doi.org/10.1016/S0019-8501(02)00228-6
Hirsch, P. M., & Levin, D. Z. (1999). Umbrella advocates versus validity police: A life-cycle model. *Organization Science*, *10*(2), 199–212. https://doi.org/10.1287/orsc.10.2.199
Hult, G. T. M., Hurley, R. F., & Knight, G. A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management*, *33*(5), 429–438. https://doi.org/10.1016/j.indmarman.2003.08.015
Jantunen, A., Nummela, N., Puumalainen, K., & Saarenketo, S. (2008). Strategic orientations of born globals—Do they really matter? *Journal of World Business*, *43*(2), 158–170. https://doi.org/10.1016/j.jwb.2007.11.015
Järvinen, J., Karjaluoto, H. (2015). The use of Web analytics for digital marketing performance measurement. *Industrial Marketing Management, 50*, 117-127. https://doi.org/10.1016/j.indmarman.2015.04.009
Kaleka, A. (2002). Resources and capabilities driving competitive advantage in export markets: guidelines for industrial exporters. *Industrial Marketing Management*, *31*(3), 273–283. https://doi.org/10.1016/S0019-8501(00)00148-6
Kieser, A., Nicolai, A., & Seidl, D. (2015). The practical relevance of management research: Turning the debate on relevance into a rigorous scientific research program. *Academy of Management Annals*, *9*(1), 143–233. https://doi.org/10.1080/19416520.2015.1011853

Kim, H.-S., & Kim, Y.-G. (2009). A CRM performance measurement framework: Its development process and application. *Industrial Marketing Management*, *38*(4), 477–489. https://doi.org/10.1016/j.indmarman.2008.04.008

Klavans, R., & Boyack, K. W. (2017). Which type of citation analysis generates the most accurate taxonomy of scientific and technical knowledge? *Journal of the Association for Information Science and Technology*, 68(4), 984–998. https://doi.org/10.1002/asi.23734

Kotabe, M., & Murray, J. Y. (2004). Global sourcing strategy and sustainable competitive advantage. *Industrial Marketing Management*, *33*(1), 7–14. https://doi.org/10.1016/j.indmarman.2003.08.004

Kowalkowski, C., Gebauer, H., Kamp, B., Parry, G. (2017). Servitization and deservitization: Overview, concepts, and definitions. *Industrial Marketing Management, 60*, 4-10. https://doi.org/10.1016/j.indmarman.2016.12.007

Kunz, W., Aksoy, L., Bart, Y., Heinonen, K., Kabadayi, S., Ordenes, F. V., Sigala, M., Diaz, D., Theodoulidis, B. (2017). Customer engagement in a Big Data world, *Journal of Services Marketing, 31(2)*, 161-171. https://doi.org/10.1108/JSM-10-2016-0352

Laanti, R., Gabrielsson, M., & Gabrielsson, P. (2007). The globalization strategies of business-to-business born global firms in the wireless technology industry. *Industrial Marketing Management*, *36*(8), 1104–1117. https://doi.org/10.1016/j.indmarman.2006.10.003

Lane, P. J., Koka, B. R., & Pathak, S. (2006). The reification of absorptive capacity: a critical review and rejuvenation of the construct. *Academy of Management Review*, *31*(4), 833–863. http://dx.doi.org/10.2307/20159255

Leek, S., & Christodoulides, G. (2011). A literature review and future agenda for B2B branding: Challenges of branding in a B2B context. *Industrial Marketing Management*, *40*(6), 830–837. https://doi.org/10.1016/j.indmarman.2011.06.006

Leek, S., & Christodoulides, G. (2012). A framework of brand value in B2B markets: The contributing role of functional and emotional components. *Industrial Marketing Management*, *41*(1), 106–114. https://doi.org/10.1016/j.indmarman.2011.11.009

Lukas, B. A., & Bell, S. J. (2000). Strategic market position and R&D capability in global manufacturing industries: Implications for organizational learning and organizational memory. *Industrial Marketing Management*, *29*(6), 565–574. https://doi.org/10.1016/S0019-8501(00)00129-2

Luo, Y., Huang, Y., & Wang, S. L. (2012). Guanxi and organizational performance: A meta-analysis. *Management and Organization Review*, *8*(1), 139–172. https://doi.org/10.1111/j.1740-8784.2011.00273.x

Martin, J. H., & Grbac, B. (2003). Using supply chain management to leverage a firm's market orientation. *Industrial Marketing Management*, *32*(1), 25–38. https://doi.org/10.1016/S0019-8501(01)00192-4

Martin, S. L., & Javalgi, R. G. (2016). Entrepreneurial orientation, marketing capabilities and performance: The moderating role of competitive Intensity on Latin American international new ventures. *Journal of Business Research, 69(6),* 2040-2051. https://doi.org/10.1016/j.jbusres.2015.10.149

Martínez-López, F. J., Merigó, J. M., Valenzuela-Fernández, L., & Nicolás, C. (2018). Fifty years of the European Journal of Marketing: a bibliometric analysis. *European Journal of Marketing, 52(1/2),* 439-468. https://doi.org/10.1108/EJM-11-2017-0853

Merrilees, B., Rundle-Thiele, S., & Lye, A. (2011). Marketing capabilities: Antecedents and implications for B2B SME performance. *Industrial Marketing Management*, *40*(3), 368–375. https://doi.org/10.1016/j.indmarman.2010.08.005

Möller, K. E. K., & Törrönen, P. (2003). Business suppliers' value creation potential: A capability-based analysis. *Industrial Marketing Management*, *32*(2), 109–118. https://doi.org/10.1016/S0019-8501(02)00225-0

Möller, K. K., & Halinen, A. (1999). Business relationships and networks:: Managerial challenge of network era. *Industrial Marketing Management*, *28*(5), 413–427. https://doi.org/10.1016/S0019-8501(99)00086-3

Möller, K., & Rajala, A. (2007). Rise of strategic nets — New modes of value creation. *Industrial Marketing Management*, *36*(7), 895–908. https://doi.org/10.1016/j.indmarman.2007.05.016

Möller, K., Rajala, A., & Svahn, S. (2005). Strategic business nets—their type and management. *Journal of Business Research*, *58*(9), 1274–1284. https://doi.org/10.1016/j.jbusres.2003.05.002

Morgan, N. A., Kaleka, A., & Katsikeas, C. S. (2004). Antecedents of export venture performance: A theoretical model and empirical assessment. *Journal of Marketing*, *68*(1), 90–108. http://www.jstor.org/stable/30161977

Müller, J. M., Pommeranz, B., Weisser, J., & Voigt, K. (2018). Digital, social media, and mobile marketing in industrial buying: Still in need of customer segmentation? Empirical evidence from Poland and Germany. *Industrial Marketing Management, 73,* 70-83. https://doi.org/10.1016/j.indmarman.2018.01.033

Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. *Strategic Management Journal, 28(2),* 121–146. https://doi.org/10.1002/smj.573
Newman, M. E. J., Girvan, M. (2004). Finding and evaluating community structure in networks. Physical Review E, 69(2), 026113. https://10.1103/PhysRevE.69.026113
Ngo, L. V., & O'Cass, A. (2009). Creating value offerings via operant resource-based capabilities. *Industrial Marketing Management*, *38*(1), 45–59. https://doi.org/10.1016/j.indmarman.2007.11.002
Ozalp, H., Cennamo, C., Gawer, A. (2018). Disruption in platform-based ecosystems. *Journal of Management Studies, 55(7),* 1203-1241. https://doi.org/10.1111/joms.12351
Perks, H., Kowalkowski, C., Witell, L., & Gustafsson, A. (2017). Network orchestration for value platform development. *Industrial Marketing Management, 67*, 106-121. https://doi.org/10.1016/j.indmarman.2017.08.002
Persson, N. (2010). An exploratory investigation of the elements of B2B brand image and its relationship to price premium. *Industrial Marketing Management*, *39*(8), 1269–1277. https://doi.org/10.1016/j.indmarman.2010.02.024
Peteraf, M., Di Stefano, G., & Verona, G. (2013). The elephant in the room of dynamic capabilities: Bringing two diverging conversations together: The Elephant in the Room of Dynamic Capabilities. *Strategic Management Journal*, *34*(12), 1389–1410. https://doi.org/10.1002/smj.2078
Popper, K. (2005). *Logic of scientific discovery*. London: Routledge.
Quinton, S., & Simkin, L. (2017). The digital journey: Reflected learnings and emerging challenges. *International Journal of Management Review, 19(4),* 455-472. https://doi.org/10.1111/ijmr.12104
Ragatz, G. L., Handfield, R. B., & Petersen, K. J. (2002). Benefits associated with supplier integration into new product development under conditions of technology uncertainty. *Journal of Business Research*, *55*(5), 389–400. https://doi.org/10.1016/S0148-2963(00)00158-2
Reimann, M., Schilke, O., & Thomas, J. S. (2010). Customer relationship management and firm performance: the mediating role of business strategy. *Journal of the Academy of Marketing Science*, *38*(3), 326–346. https://doi.org/10.1007/s11747-009-0164-y
Rey-Martí, A., Ribeiro-Soriano, D., & Palacios-Marqués, D. (2016). A bibliometric analysis of social entrepreneurship. *Journal of Business Research*, *69*(5), 1651–1655. https://doi.org/10.1016/j.jbusres.2015.10.033
Rhee, J., Park, T., & Hyung Lee, D. (2010). Drivers of innovativeness and performance for innovative SMEs in South Korea: Mediation of learning orientation. *Technovation*, *30*, 65–75. https://doi.org/10.1016/j.technovation.2009.04.008
Ritala, P. (2012). Coopetition strategy – When is it successful? Empirical evidence on innovation and market performance. *British Journal of Management*, *23*(3), 307–324. https://doi.org/10.1111/j.1467-8551.2011.00741.x
Ritala, P., & Hurmelinna-Laukkanen, P. (2012). Incremental and radical innovation in coopetition— The role of absorptive capacity and appropriability. *Journal of Product Innovation Management*, *30*(1), 154–169. https://doi.org/10.1111/j.1540-5885.2012.00956.x
Ritter, T., & Gemünden, H. G. (2003). Network competence: Its impact on innovation success and its antecedents. *Journal of Business Research*, *56*(9), 745–755. https://doi.org/10.1016/S0148-2963(01)00259-4
Ritter, T., Wilkinson, I. F., & Johnston, W. J. (2004). Managing in complex business networks. *Industrial Marketing Management*, *33*(3), 175–183. https://doi.org/10.1016/j.indmarman.2003.10.016
Ryals, L. (2005). Making customer relationship management work: The measurement and profitable management of customer relationships. *Journal of Marketing*, *69*(4), 252–261. https://doi.org/10.1509/jmkg.2005.69.4.252
Saeed, S., Yousafzai, S., Paladino, A., De Luca, L. (2015). Inside-out and outside-in orientations: A meta-analysis of orientation's effects on innovation and firm performance. *Industrial Marketing Management, 47*, 121-133. https://doi.org/10.1016/j.indmarman.2015.02.037
Sarin, S., Haon, C., & Belkhouja, M. (2018). A bibliometric analysis of the knowledge exchange patterns between major technology and innovation management journals (1999–2013). *Journal of Product Innovation Management*, 35(1), 2–8. https://doi.org/10.1111/jpim.12431
Schildt, H. A. (2006) SITKIS: Software for bibliometric data management and analysis v.1.5. Helsinki: Institute of Strategy and International Business. Available at: www.hut.fi/_hschildt/sitkis.

Schildt, H. A., & Mattsson, J. T. (2006). A dense network sub-grouping algorithm for co-citation analysis and its implementation in the software tool Sitkis. *Scientometrics*, 67(1), 143–163. https://doi.org/10.1007/s11192-006-0054-8

Schilke, O., Hu, S., & Helfat, C. E. (2017). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of Management Annals*, *12*(1), 390–439. https://doi.org/10.5465/annals.2016.0014

Seggie, S. H., Cavusgil, E., & Phelan, S. E. (2007). Measurement of return on marketing investment: A conceptual framework and the future of marketing metrics. *Industrial Marketing Management*, *36*(6), 834–841. https://doi.org/10.1016/j.indmarman.2006.11.001

Slater, S. F., Hult, G. T. M., & Olson, E. M. (2010). Factors influencing the relative importance of marketing strategy creativity and marketing strategy implementation effectiveness. *Industrial Marketing Management*, *39*(4), 551–559. https://doi.org/10.1016/j.indmarman.2008.03.007

Smirnova, M., Naudé, P. Henneberg, S. C., Mouzas, S., Kouchtch, S. P. (2011). The impact of market orientation on the development of relational capabilities and performance outcomes: The case of Russian industrial firms. *Industrial Marketing Management, 40(1)*, 44-53. https://doi.org/10.1016/j.indmarman.2010.09.009

Storbacka, K. (2011). A solution business model: Capabilities and management practices for integrated solutions. *Industrial Marketing Management*, *40*(5), 699–711. https://doi.org/10.1016/j.indmarman.2011.05.003

Swafford, P. M., Ghosh, S., & Murthy, N. (2008). Achieving supply chain agility through IT integration and flexibility. *International Journal of Production Economics*, *116*(2), 288–297. https://doi.org/10.1016/j.ijpe.2008.09.002

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350. https://doi.org/10.1002/smj.640

Teece, D. J. (2012). Dynamic capabilities: Routines versus entrepreneurial action. *Journal of Management Studies*, *49*(8), 1395–1401. https://doi.org/10.1111/j.1467-6486.2012.01080.x

Teece, D. J. (2014). The Foundations of Enterprise Performance: Dynamic and Ordinary Capabilities in an (Economic) Theory of Firms. *Academy of Management Perspectives*, *28*(4), 328–352. https://doi.org/10.5465/amp.2013.0116

Teece, D. J. (2018). Profiting from innovation in the digital economy: Enabling technologies, standards, and licensing models in the wireless world. *Research Policy, 47(8),* 1367-1387. https://doi.org/10.1016/j.respol.2017.01.015

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

Treiblmaier, H. (in press). The impact of the blockchain on the supply chain: a theory-based research framework and a call for action. *Supply Chain Management: An International Journal.* https://doi.org/10.1108/SCM-01-2018-0029

Ulaga, W. (2003). Capturing value creation in business relationships: A customer perspective. *Industrial Marketing Management*, *32*(8), 677–693. https://doi.org/10.1016/j.indmarman.2003.06.008

Ulaga, W., & Eggert, A. (2006). Value-based differentiation in business relationships: Gaining and sustaining key supplier status. *Journal of Marketing*, *70*(1), 119–136. https://doi.org/10.1509/jmkg.2006.70.1.119

van Eck, N. J., & Waltman, L. (2014). CitNetExplorer: A new software tool for analyzing and visualizing citation networks. *ArXiv Preprint ArXiv:1404.5322*. Retrieved from http://arxiv.org/abs/1404.5322

van Eck, N. J., & Waltman, L. (2017). Citation-based clustering of publications using *CitNetExplorer* and *VOSviewer*. *Scientometrics*, *111*(2), 1053–1070. https://doi.org/10.1007/s11192-017-2300-7

Vargo, S. L., & Lusch, R. F. (2011). It's all B2B…and beyond: Toward a systems perspective of the market. *Industrial Marketing Management*, *40*(2), 181–187. https://doi.org/10.1016/j.indmarman.2010.06.026

Vieira, E., & Ferreira Gomes, J. (2009). A comparison of Scopus and Web of Science for a typical university. *Scientometrics*, *81*, 587–600. https://doi.org/10.1007/s11192-009-2178-0

Visconti, L. M. (2010). Ethnographic Case Study (ECS): Abductive modeling of ethnography and improving the relevance in business marketing research. *Industrial Marketing Management*, *39*(1), 25–39. https://doi.org/10.1016/j.indmarman.2008.04.019

Waltman, L. (2016). A review of the literature on citation impact indicators. *Journal of Informetrics*, *10*(2), 365–391. https://doi.org/10.1016/j.joi.2016.02.007

Wang, C. L., & Ahmed, P. K., (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Review, 9(1),* 31-51. https://doi.org/10.1111/j.1468-2370.2007.00201.x

Wang, T., Chen, Y. (2015). Capability stretching in product innovation. *Journal of Management, 44(2)*, 784-810. https://doi.org/10.1177/0149206315594847

Weerawardena, J., & O'Cass, A. (2004). Exploring the characteristics of the market-driven firms and antecedents to sustained competitive advantage. *Industrial Marketing Management*, *33*(5), 419–428. https://doi.org/10.1016/j.indmarman.2003.07.002

Weerawardena, J., Mort, G. S., Liesch, P. W., & Knight, G. (2007). Conceptualizing accelerated internationalization in the born global firm: A dynamic capabilities perspective. *Journal of World Business*, *42*(3), 294–306. https://doi.org/10.1016/j.jwb.2007.04.004

Whetten, D. A. (1989). What Constitutes a Theoretical Contribution? *Academy of Management Review*, *14*(4), 490–495. https://doi.org/10.5465/amr.1989.4308371

Wilson, H., & Daniel, E. (2007). The multi-channel challenge: A dynamic capability approach. *Industrial Marketing Management*, *36*(1), 10–20. https://doi.org/10.1016/j.indmarman.2006.06.015

Wu, F., Yeniyurt, S., Kim, D., & Cavusgil, S. T. (2006). The impact of information technology on supply chain capabilities and firm performance: A resource-based view. *Industrial Marketing Management*, *35*(4), 493–504. https://doi.org/10.1016/j.indmarman.2005.05.003

Wu, J. (2014). Cooperation with competitors and product innovation: Moderating effects of technological capability and alliances with universities. *Industrial Marketing Management*, *43*(2), 199–209. https://doi.org/10.1016/j.indmarman.2013.11.002

Zablah, A. R., Bellenger, D. N., & Johnston, W. J. (2004). An evaluation of divergent perspectives on customer relationship management: Towards a common understanding of an emerging phenomenon. *Industrial Marketing Management*, *33*(6), 475–489. https://doi.org/10.1016/j.indmarman.2004.01.006

Table 1: Highest influence publications

Author(s)	Publication Title	Journal	Publication Year	Citation Score
Calantone RJ, Cavusgil ST, Zhao YS	Learning orientation, firm innovation capability, and firm performance	IMM	2002	542
Hult GTM, Hurley RF, Knight GA	Innovativeness: Its antecedents and impact on business performance	IMM	2004	209
Möller KEK, Torronen P	Business suppliers' value creation potential: A capability-based analysis	IMM	2003	186
Wu F, Yeniyurt S, Kim D, Cavusgil ST	The impact of information technology on supply chain capabilities and firm performance: A resource-based view	IMM	2006	171
Möller KK, Halinen a	Business relationships and networks: Managerial challenge of network era	IMM	1999	168
Ulaga W, Eggert A	Value-based differentiation in business relationships: Gaining and sustaining key supplier status	JM	2006	159
Möller K, Rajala A	Rise of strategic nets: New modes of value creation	IMM	2007	137
Ritter T, Wilkinson IF, Johnston WJ	Managing in complex business networks	IMM	2004	130
Aragon-Correa JA, Garcia-Morales VJ, Cordon-Pozo E	Leadership and organizational learning's role on innovation and performance: Lessons from Spain	IMM	2007	127
Halinen A, Törnroos JA	Using case methods in the study of contemporary business networks	JBR	2005	122
Hertz S, Alfredsson M	Strategic development of third party logistics providers	IMM	2003	121
Ulaga W	Capturing value creation in business relationships: A customer perspective	IMM	2003	113
Chen YS, Lin MJI, Chang CH	The positive effects of relationship learning and absorptive capacity on innovation performance and competitive advantage in industrial markets	IMM	2009	113
Kotabe M, Murray JY	Global sourcing strategy and sustainable competitive advantage	IMM	2004	112
Ritter T, Gemunden HG	Network competence: Its impact on innovation success and its antecedents	JBR	2003	111
Eggert A, Ulaga W, Schultz F	Value creation in the relationship life cycle: A quasi-longitudinal analysis	IMM	2006	108
Storbacka K	A solution business model: Capabilities and management practices for integrated solutions	IMM	2011	106
Newbert SL	Empirical research on the resource-based view of the firm: An assessment and suggestions for future research	SMJ	2007	104
Möller K, Rajala A, Svahn S	Strategic business nets: Their type and management	JBR	2005	103
Vargo SL, Lusch RF	It's all B2B ... and beyond: Toward a systems perspective of the market	IMM	2011	102

Key IMM: Industrial Marketing Management
JBR: Journal of Business Research
SMJ: Strategic Management Journal
JM: Journal of Marketing

Table 2: Overview of emerging research themes

Cluster	Main focus	Popularity	Most influential papers
1. Capabilities and Business Value	What are the consequences of capabilities in terms of business value creation and performance?	1512 publications (29.5% of the population)	Möller and Halinen (1999), Möller and Torronen (2003), Ulaga and Eggert (2006)
2. Capabilities and RBV Orientation	How do marketing, learning and innovation orientation (and their interplay) affect competitive advantage?	1483 publications (29% of the population)	Aragon-Correa et al. (2007), Calantone et al. (2002), Hult et al. (2004)
3. Supply Chain Capabilities	What are the most important supply chain capabilities for greater firm performance and what factors support development of them?	1130 publications (22% of the population)	Hertz and Alfredsson (2003), Kotabe and Murray (2004), Wu et al. (2006)
4. Capabilities and Internationalization	What are the capabilities that are required for born-global firms and international ventures to perform better?	304 publications (6% of the population)	Kaleka (2002); Laanti et al. (2007), Morgan et al. (2004)
5. Customer Relationship Management Capabilities	What are the specific CRM capabilities and how do they relate to firm performance?	272 publications (5.3% of the population).	Kim and Kim (2009), Ryals (2005), Zablah et al. (2004)
6. Branding Capabilities	What are the main brand-related capabilities and how do they relate to firm performance?	126 publications (2.5% of the population)	Beverland et al. (2007), Leek and Christodoulides (2012), Merrilees et al. (2011)
7. Coopetition Capabilities	What capabilities help firms better deal with the paradoxes introduced by coopetition?	118 publications (2.3% of the population)	Bengtsson and Kock (2014), Chen and Wu (2011), Ritala (2012)

Table 3: Research gaps and future research directions

	Relevant research areas	Possible research questions	Exemplar references (IMM and non-IMM)
Mature Clusters	***Cluster 1:*** Consolidation via Meta-Analyses	What do we know about the influence of industrial marketing capabilities on business value? Do stronger marketing and supply chain capabilities really matter to improve firm profitability?	*IMM*: Saeed , Yousafzai, Paladino, & De Luca (2015) *Non-IMM*: Ellis (2006)
	Cluster 2: Rejuvenation, Resources and Capabilities for Industry 4.0	How could incumbents 'make or buy' the critical resources and capabilities for Industry 4.0? What is the role of industrial marketing capabilities when the emphasis shifts from demand- to supply-side strategy and investments?	*IMM*: Kowalkowski, Gebauer, Kamp, & Parry (2017) *Non-IMM*: Wang & Chen (2015)
Debated Clusters	***Cluster 3:*** Supply-chain Capabilities and New Technologies	What new supply-chain capabilities do firms require to leverage the benefits of new technologies such as blockchain? How the availability of an increasingly large and more sophisticated base of data shapes the effectiveness of supply-chains in mature as well as emerging economies? What is the impact of stronger prediction power enabled by artificial intelligence?	*IMM*: Wu, Yeniyurt, Kim, & Cavusgil, (2006) *Non-IMM*: Treiblmaier, 2018
	Cluster 4: Internationalization capabilities in BRIC and emerging economies	How do BRIC SMEs as well as corporates build marketing and supply chain capabilities to enter and expand in more advanced economies (e.g. Chinese incumbents expanding abroad)? What are the capabilities necessary to internationalize successfully across more emerging economies such as in Sub-Saharan Africa? Do foreign entrants' and incumbents' capabilities differ in countries with weak institutional regimes?	*IMM*: Smirnova et al. (2011) *Non-IMM*: Martin & Javalgi (2016)
Nascent Clusters	***Cluster 5***: CRM and big data analytics	How the availability of big data and recent technological advances in making use of such data (e.g., machine learning) affect the value of CRM capabilities? Are there any specific CRM capabilities needed to derive value from such advances? How do growing privacy concerns and awareness affect the relevance and value of specific CRM capabilities? What CRM capabilities are most important to deliver an effective omni-channel experience?	*IMM*: Järvinen & Karjaluoto (2015) *Non-IMM*: Kunz et al. (2017)
	Cluster 6: Digital branding strategy	How relevant are traditional branding capabilities in the digital age? How do traditional and digital branding capabilities influence effectiveness of each other? How does effectiveness of digital branding capabilities overlap or differ in B2B and B2C markets? Are there specific branding capabilities that determine creation of brand value in different digital channels such as online and mobile? What specific branding capabilities are required to derive value from interactions with buyers/consumers?	*IMM*: Müller, Pommeranz, Weisser, & Voigt (2018) *Non-IMM*: Quinton & Simkin (2017)
	Cluster 7: Industrial marketing capabilities in two-side markets	What are the industrial marketing capabilities required to create and capture value in two-sided markets (e.g., marketplaces, multi-sided)? Do they differ from those needed in traditional one-sided markets? How do firms effectively manage marketing and supply chain relationships in complex models that connect several providers of complementary resources and capabilities? How does coopetition unfold in these markets?	*IMM*: Perks, H., Kowalkowski, C., Witell, L., & Gustafsson (2017) *Non-IMM*: Ozalp, Cennamo, & Gawer (2018)

Fig.1. Geographical analysis of IMM publication output

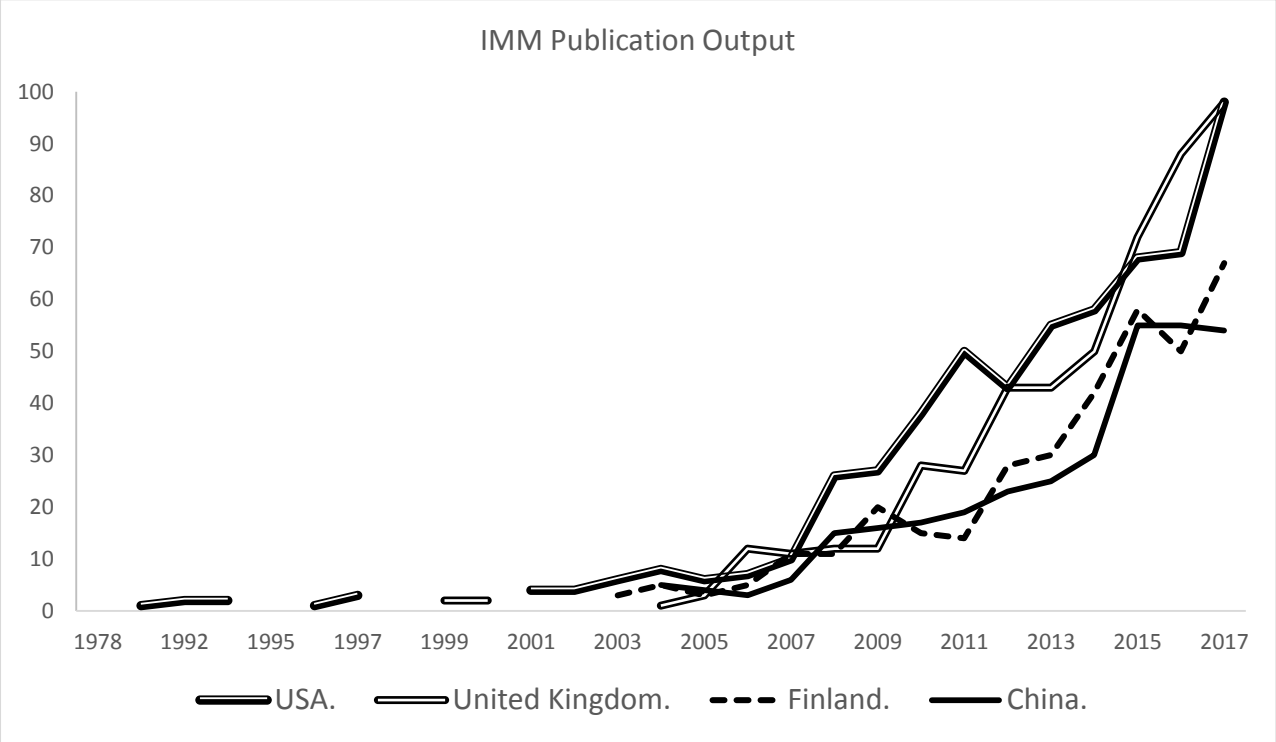


Fig.2. Capabilities research lifecycle and emerging themes

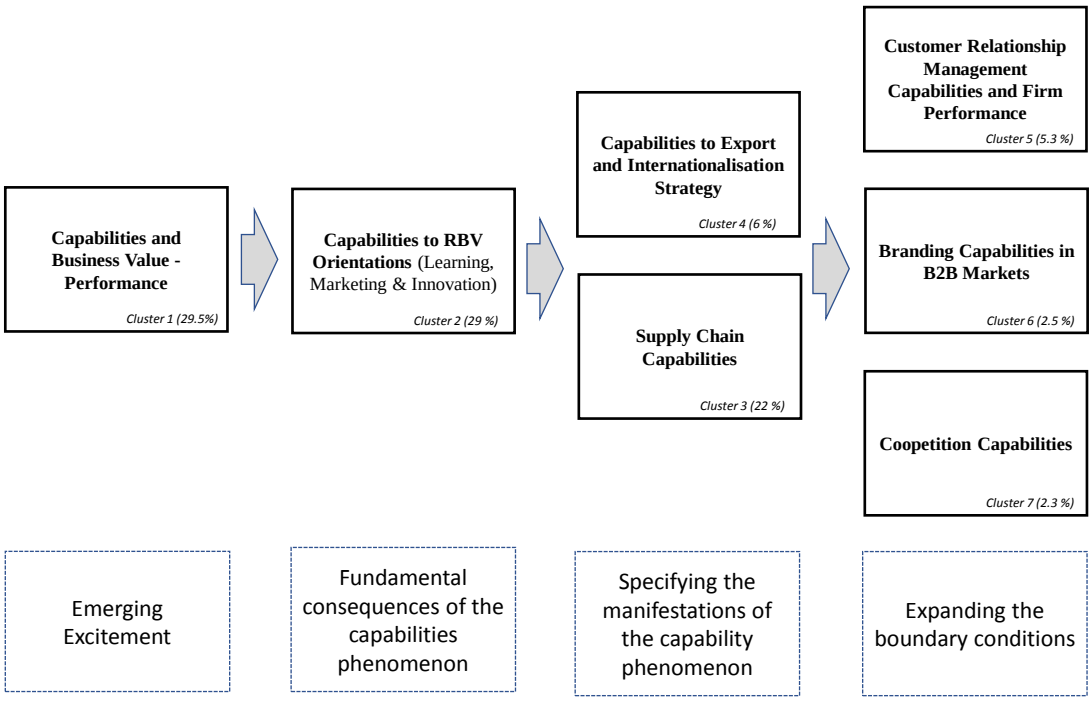
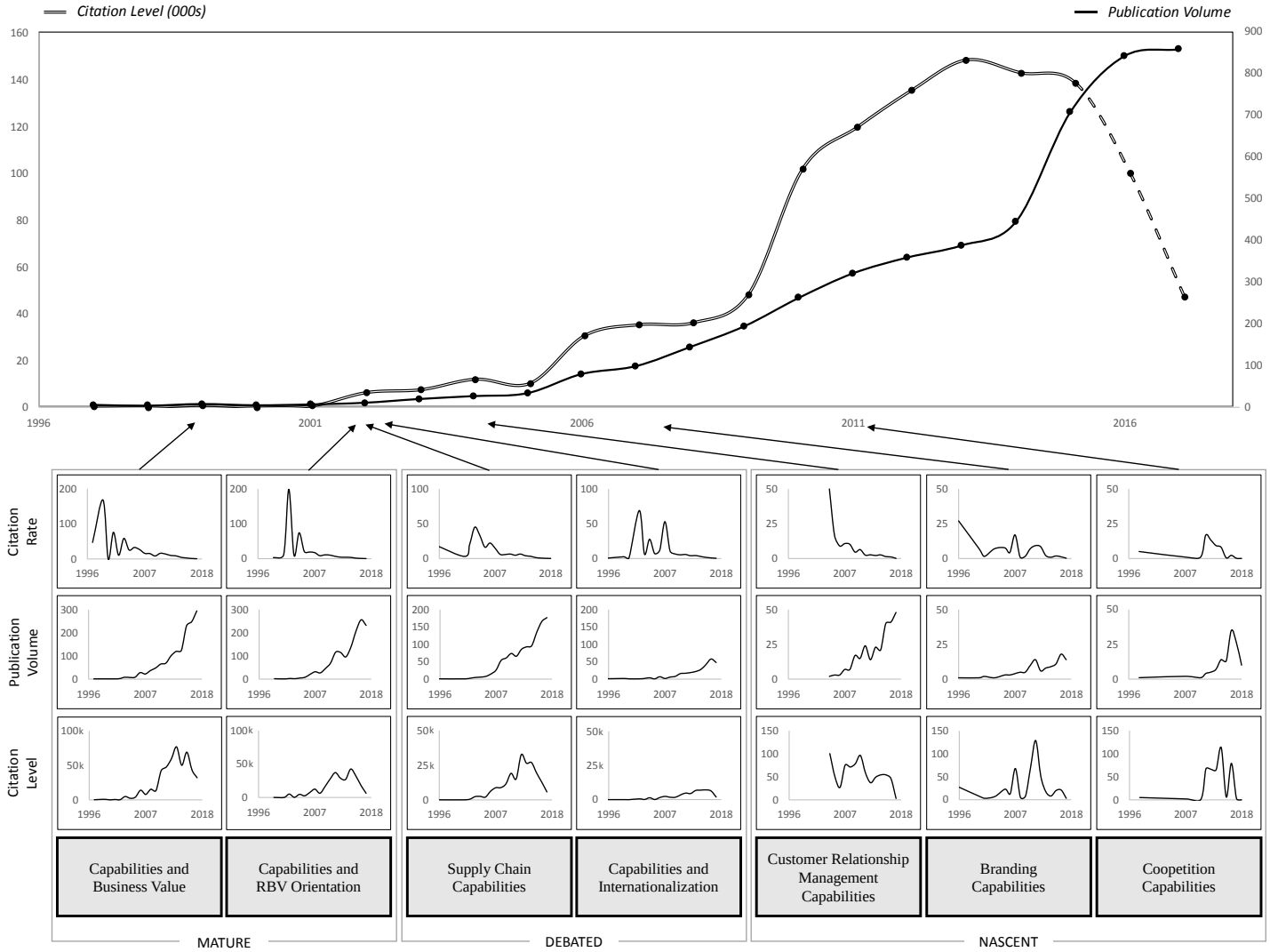


Fig.3. Temporal development and maturity of IMM capabilities research



Note. The scale on y-axes is different in each block, i.e. Mature, Debated, and Nascent.

Fig.4. Diffusion of inter-cluster influence (Top 5 articles per cluster)

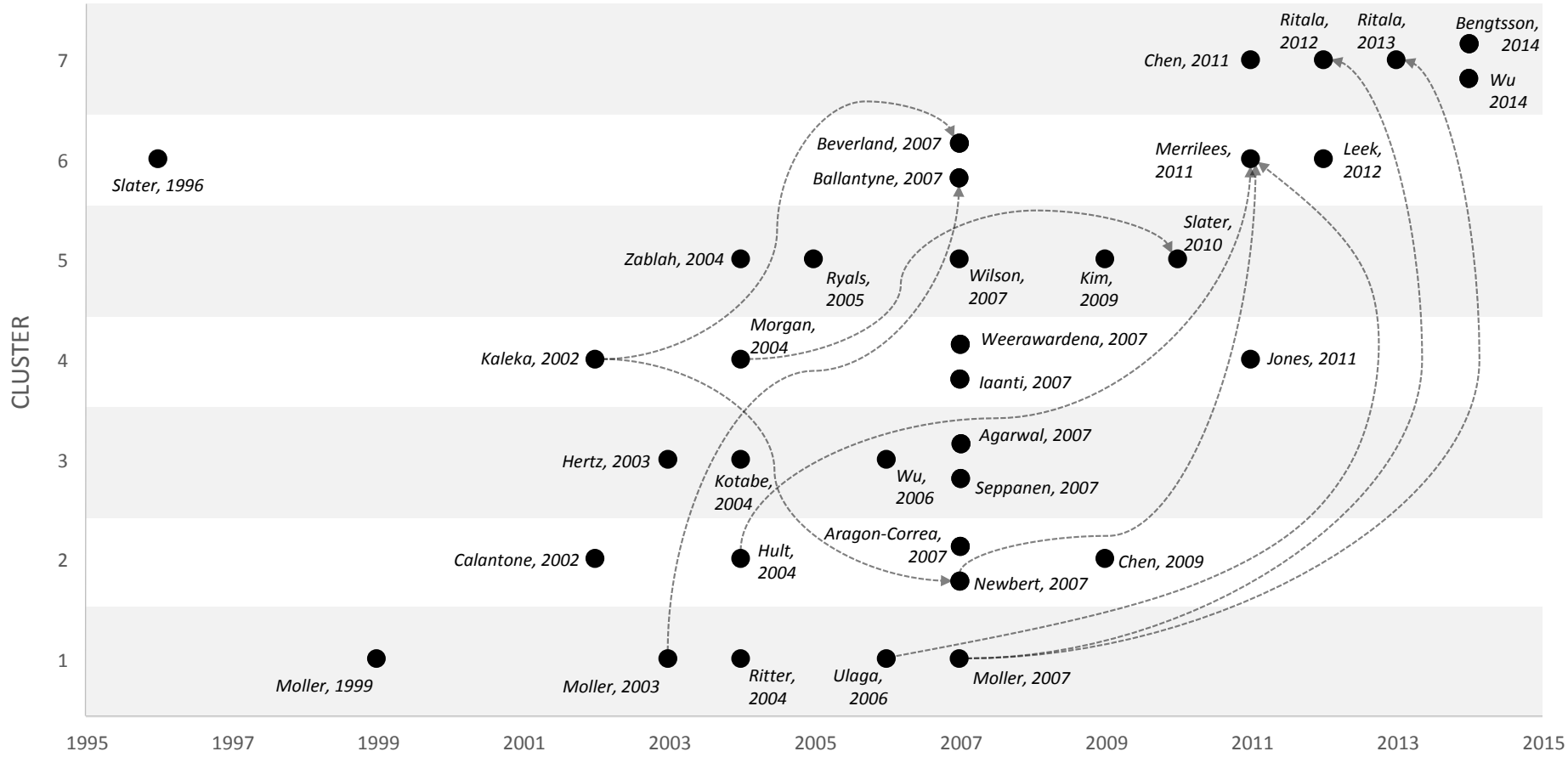


Fig.5. Evolution of Methodological Focus